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PATENT & TRADEMARK OFFICE

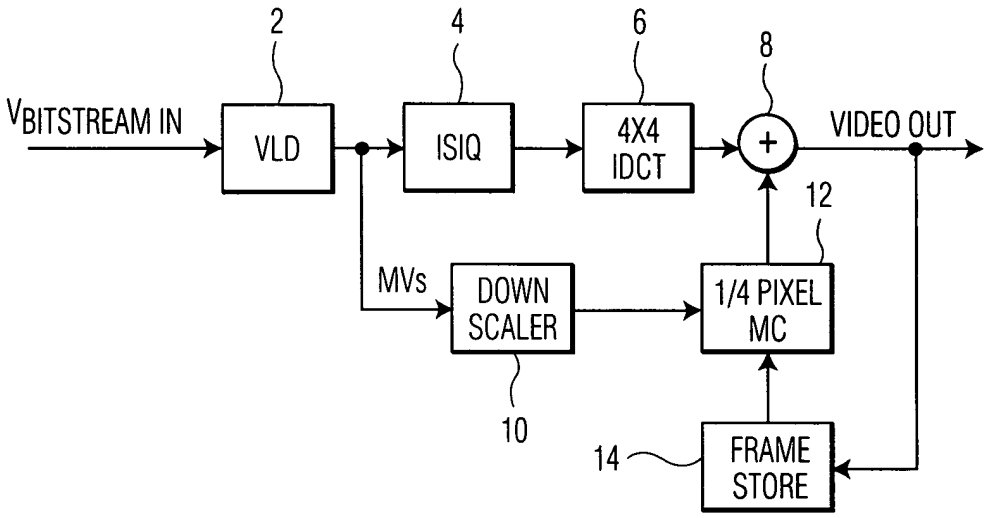
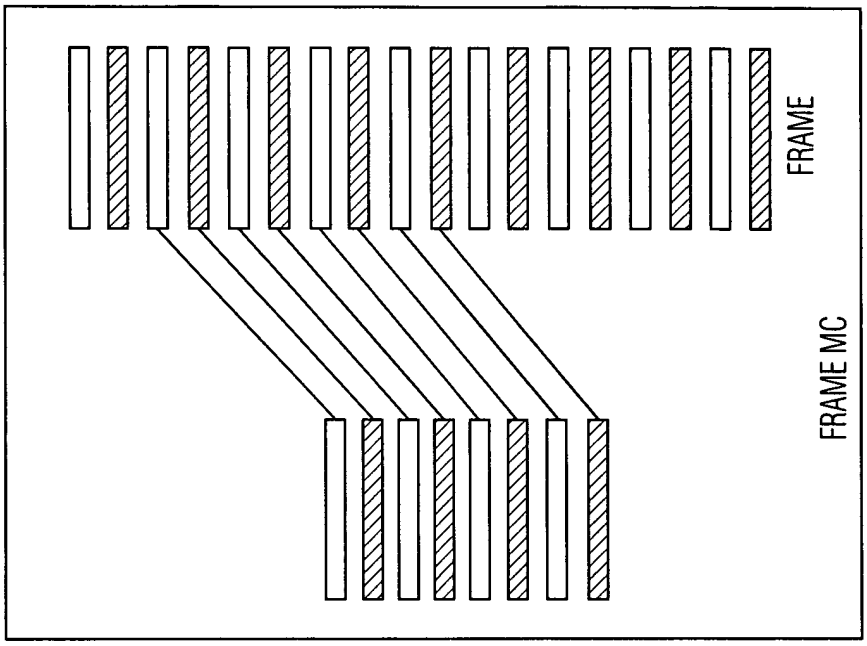
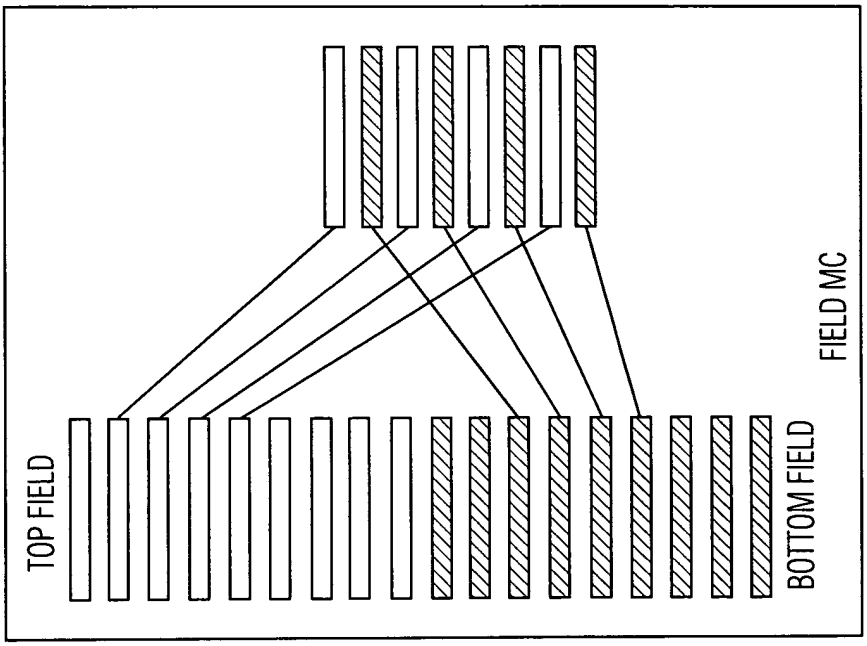


FIG. 1
(PRIOR ART)

FIG. 2
(PRIOR ART)





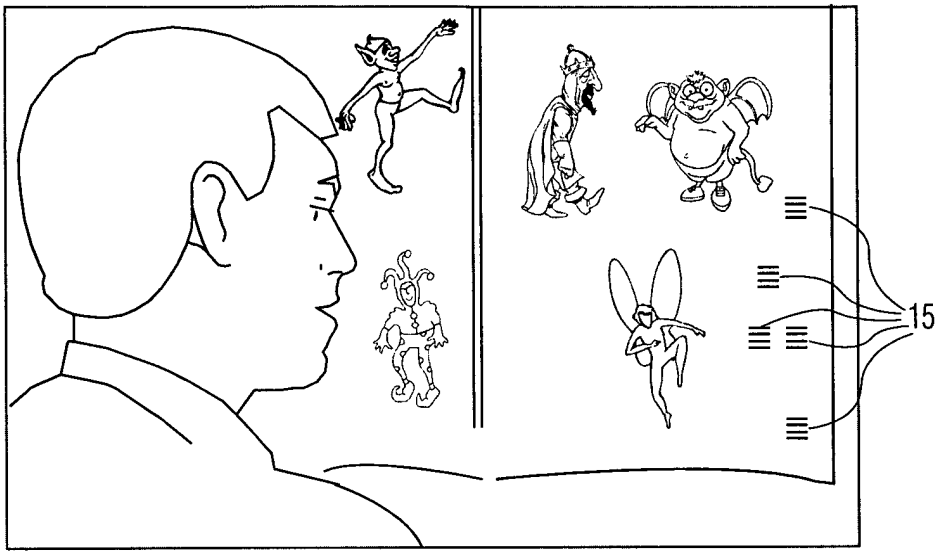

15

FIG. 3

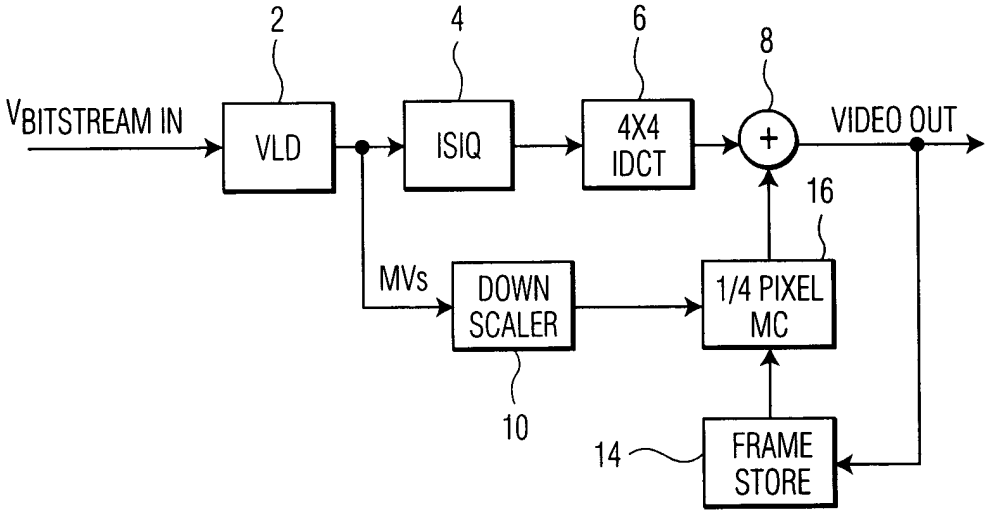

2
4
6
8
VBITSTREAM IN
VLD
ISIQ
4X4 IDCT
VIDEO OUT
16
MVs
DOWN SCALER
1/4 PIXEL MC
10
14
FRAME STORE

FIG. 4

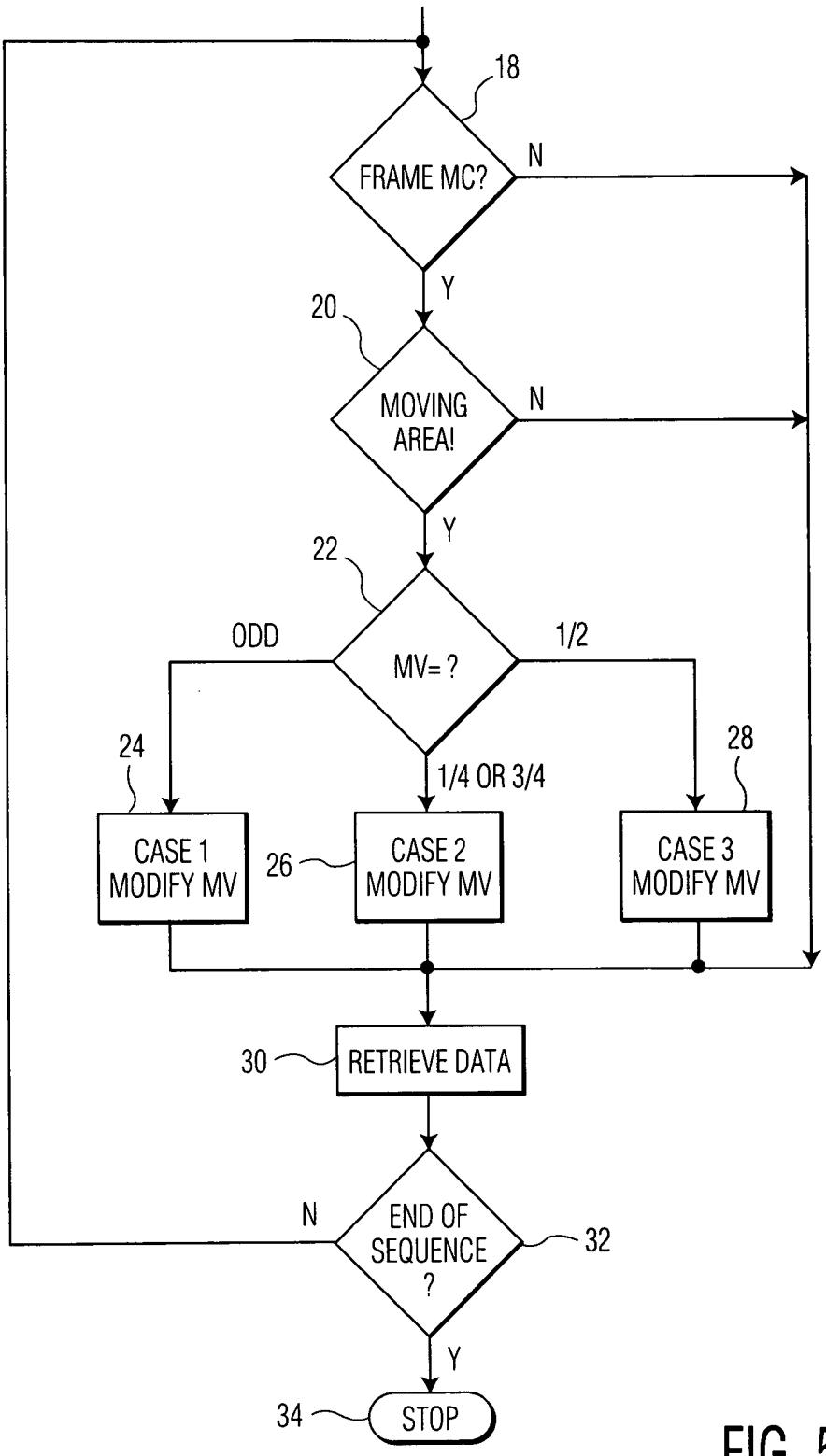

18
FRAME MC?
N
Y
20
MOVING AREA!
N
Y
22
MV= ?
ODD
1/2
1/4 OR 3/4
24
26
28
CASE 1 MODIFY MV
CASE 2 MODIFY MV
CASE 3 MODIFY MV
30
RETRIEVE DATA
N
END OF SEQUENCE ?
32
Y
34
STOP

FIG. 5

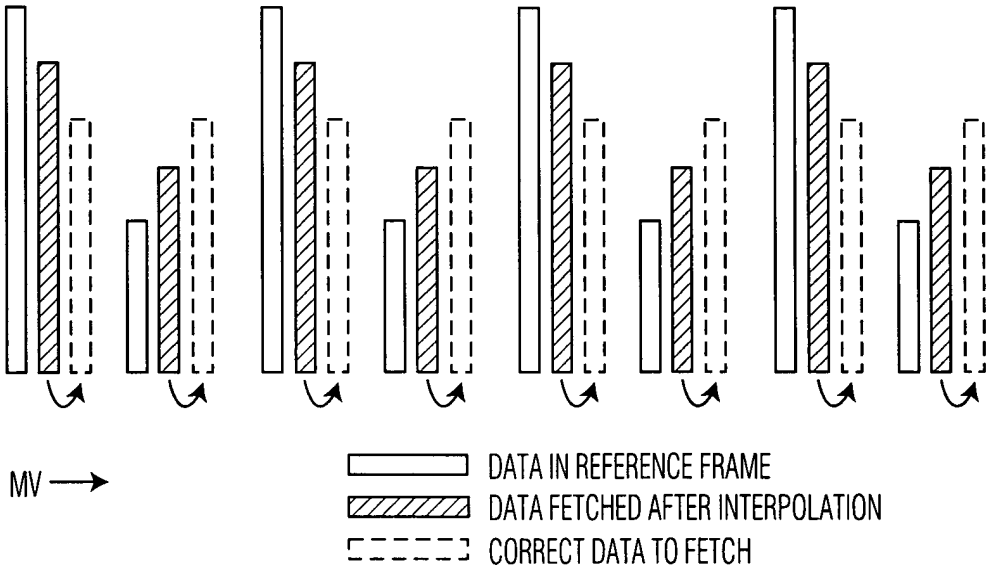

MV
DATA IN REFERENCE FRAME
DATA FETCHED AFTER INTERPOLATION
CORRECT DATA TO FETCH

FIG. 6a

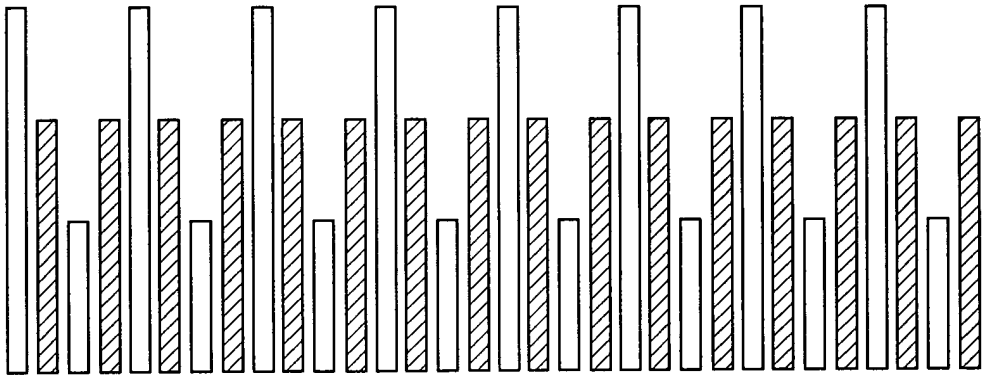


FIG. 6b

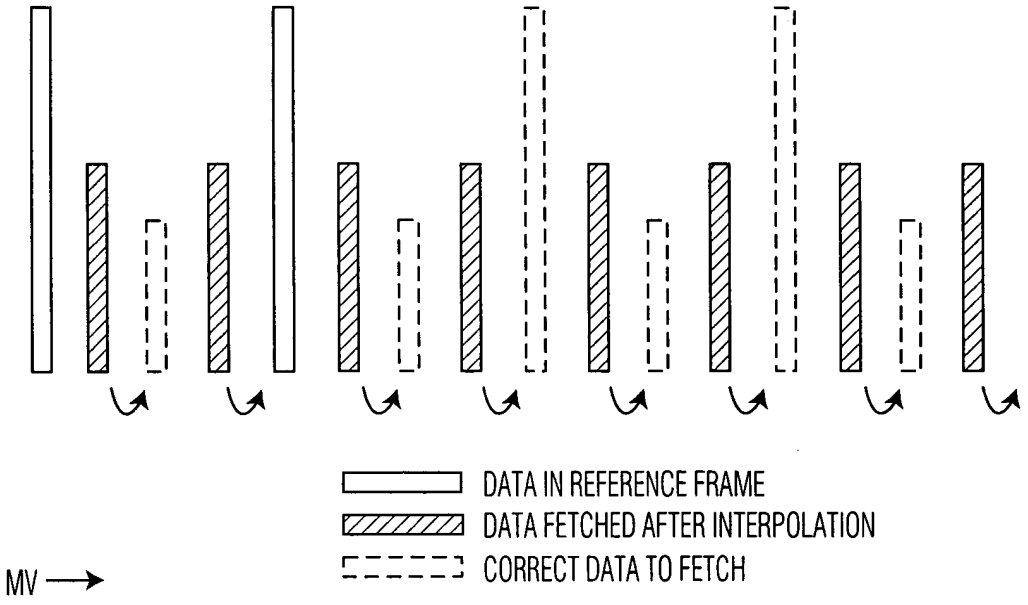

DATA IN REFERENCE FRAME
DATA FETCHED AFTER INTERPOLATION
CORRECT DATA TO FETCH
MV

FIG. 7a

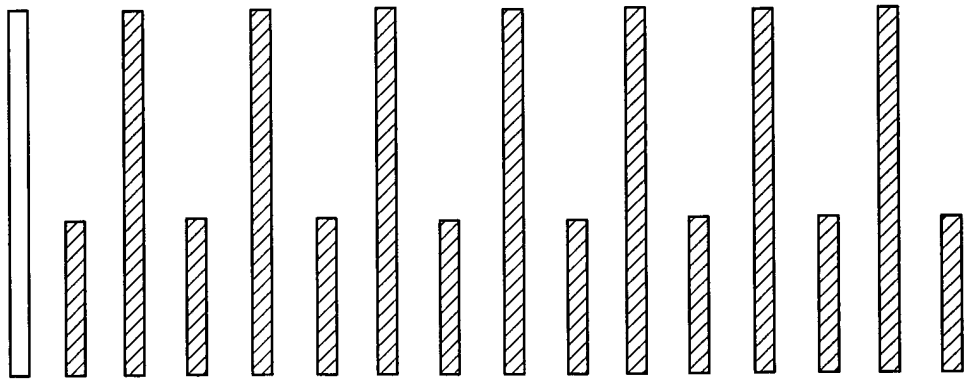


FIG. 7b

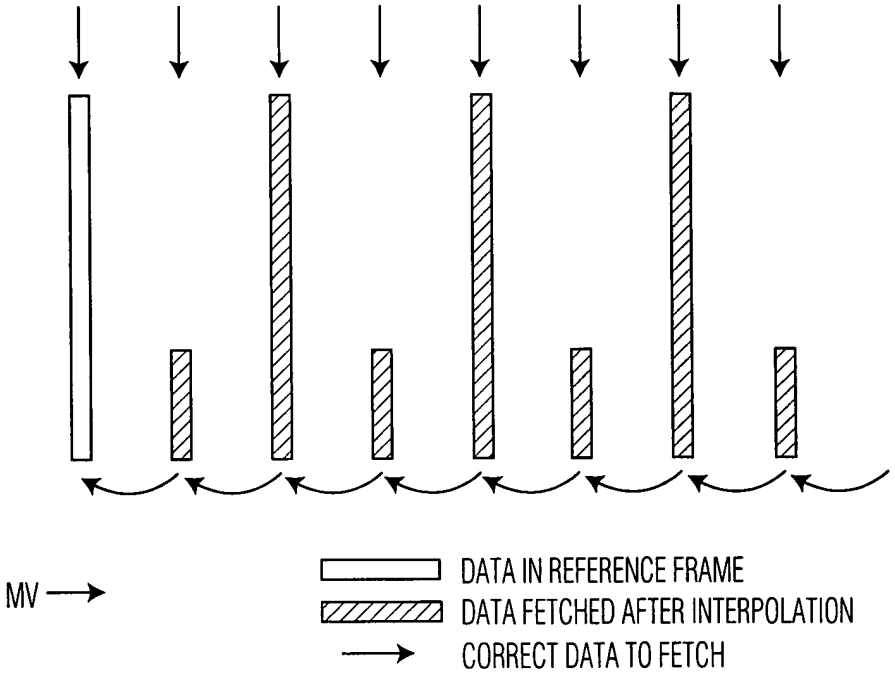

MV
DATA IN REFERENCE FRAME
DATA FETCHED AFTER INTERPOLATION
CORRECT DATA TO FETCH

FIG. 8a

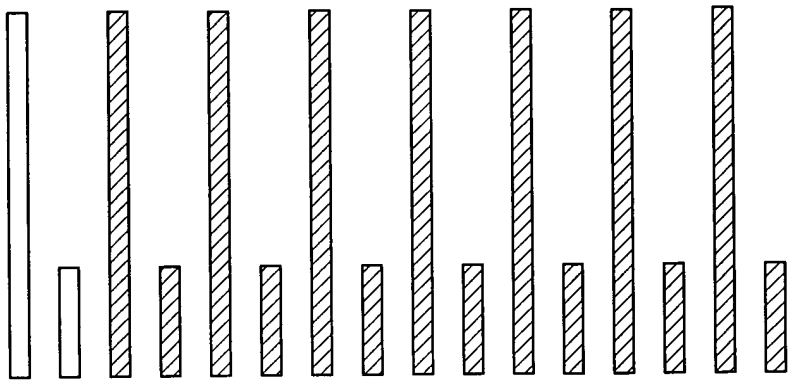


FIG. 8b

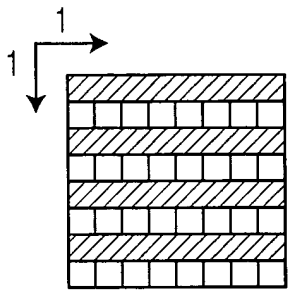


FIG. 9

```
diff = 0;                                   // difference
for (selected i) {                          // for each selected column i
   for (j=0; j<h; j+=2){                    // for each adjacent pair of pixels
         diff += src[j][i] - src[j+1][i];   // calculate the difference and accumulate
   }
}
diff /= (# of selected i) * h/2;            // average

if (abs(diff) > threshold) {
         moving area;
} else {
         no moving area;
}
```

FIG. 10

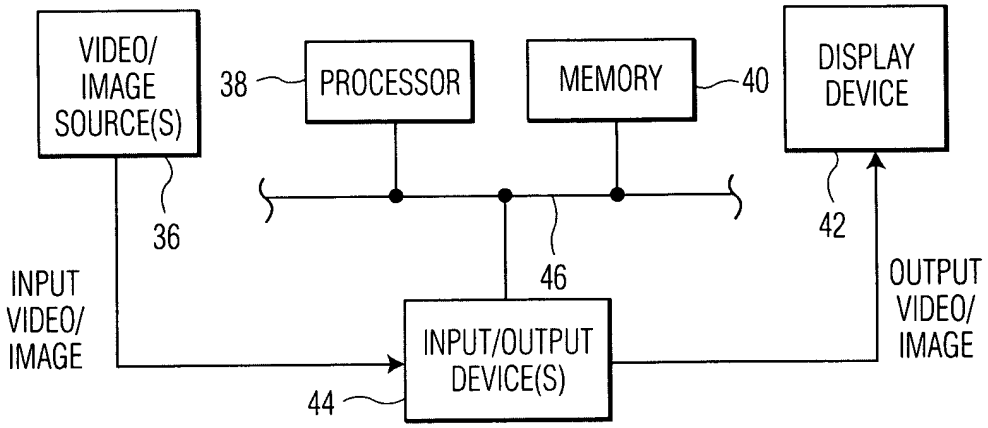


FIG. 11